IN THE SPECIFICATION

1. Please amend paragraphs [0004]-[0008] as follows:

[0004] The bar code is comprised of blanks positioned at [[a]] leading and trailing ends of the bar code, a start line indicating a data start point and [[the]] kind of the bar code, a stop line indicating a data end point, and an interpretation line positioned at an upper or a lower part of the bar code and represented by digits, English letters, and signs such as a hyphen. The bar code used in a field requiring accurate data further comprises a check digit for checking whether or not data is accurately read.

[0005] The bar code indicates data [[of]] relative to goods ~~on a~~ including manufacturing nation, [[a]] manufacturing company, [[a]] manufacturing code number, [[a]] manufacturing standard, [[a]] price, and other information thereof. The data may be changed according to the kind of goods, [[a]] the manufacturing company, or the kind of [[the]] bar code.

[0006] Generally, a bar code is adhered to a display apparatus, the ~~is adhered a~~ bar code indicating data on [[a]] manufacturing company, [[a]] manufacturing date, [[a]] manufacturing model, and other information, and therefore a manufacturer utilizes the bar code when the display apparatus is in inventory management or after-sale service.

[0007] In the case of after-sale service, a service engineer repairs the display apparatus and records data on the repair service, and then obtains contents of the bar code of the display apparatus by reading the bar code with a bar-code reader. Thus, it is possible to [[make]] develop a database on the basis of the service data together with the contents, such as [[a]] manufacturing date, [[a]] manufacturing model, and other information, of the bar code of the display apparatus, so that the data stored in the database may be used for goods development data.

[0008] However, the bar code may be worn away or ~~vanished~~ may disappear due to carelessness of a user or during movement of the display apparatus, so that it is difficult to get data on the display apparatus through the bar code.

2. Please amend paragraph [0010] as follows:

[0010] While these recent efforts provide advantages, ~~I note~~ it is noted that they fail to adequately provide an efficient, convenient, and improved display apparatus and controlling method thereof.

3. Please amend paragraphs [0011]-[0012] as follows:

[0011] Accordingly, the present invention has been [[made]] developed while keeping in mind the above-described shortcomings and ~~user's need~~ needs of the user, and an object of the present invention is to provide a display apparatus and a controlling method thereof, in which it is easy to get data ~~implied with~~ entered on a bar code when the bar code may be worn away or vanished.

[0012] This and other objects of the present invention may be accomplished by the provision of a display apparatus comprising: a display part for displaying a video signal;[[,]] ~~comprising~~ a memory for storing [[a]] predetermined bar code data; a bar code show key for selecting the bar code data stored in the memory ~~to be displayed~~ for display; an on screen display (OSD) part for executing an on screen display for adjusting a displaying state of the display part; and a controller for controlling the bar code data to be displayed on the display part through the on screen display part when the bar code data is selected by the bar code show key.

4. Please amend paragraphs [0014]-[0019] as follows:

[0014] In the memory, there is also ~~is further~~ stored after-sale service data [[on]] relating to at least one of occasion of service [[times]], [[a]] cause of service, a solution [[of]] to the cause of service or service problem, and other information, and the controller displays on the on screen display an after-sale service indicating line represented by at least one of digits, English letters, and signs, and indicating the after-sale service data when the bar code data is selected by the bar code show key.

[0015] The controller controls ~~used fact~~ usage data [[on]] relating to at least one of [[used]] usage time and on/off times to be stored in the memory, and the bar code indicates the ~~used fact~~ usage data.

[0016] According to another aspect of the present invention, the above and other objects may be also achieved by the provision of a method of controlling a display apparatus comprising a display part displaying a video signal, the method comprising the steps of: storing [[a]] predetermined bar code data in a memory; selecting the bar code data ~~to be displayed~~ for display; and displaying the bar code data stored in the memory on the display part.

[0017] In the displaying step, [[on]] the display part ~~is displayed~~ displays manufacturing data [[on]] relating to at least one of [[a]] manufacturing model, [[a]] manufacturing specification, [[an]] accessories specification, and other information.~~, is displayed on the display part; an~~ The display part also displays after-sale service data [[on]] relating to at least one of service times, [[a]] cause of service, [[a]] solution [[of]] to the [[cause]] problem which caused the service, and other information, as well as usage~~; or used fact~~ data [[on]] relating to at least one of [[used]] usage time and on/off times to be stored in the memory.

[0018] To achieve these and other objects in accordance with the principles of the present invention, as embodied and broadly described, the present invention provides a display apparatus having a display part for displaying a video signal, the apparatus comprising: a memory storing predetermined bar code data; a bar code show key for selecting said bar code data to be displayed; an on screen display part executing an on screen display for adjusting a displaying state of said display part; and a controller for controlling said bar code data to be displayed on said display part through said on screen display part when said bar code data is selected by said bar code show key.

[0019] To achieve these and other objects in accordance with the principles of the present invention, as embodied and broadly described, the present invention provides a method of controlling a display apparatus comprising a display part displaying a video signal, the

method comprising: storing predetermined bar code data in a memory; selecting said bar code data to be displayed; and displaying said bar code data stored in said memory on said display part.

5. Please amend paragraphs [0028]-[0034] as follows:

[0028] A display apparatus according to the present invention can display bar code data on a panel through on screen display (OSD). As shown in Fig. 1, the display apparatus is comprised of a main body 1 forming an external appearance, and a panel 3 on which a picture is displayed. At the lower part of the main body 1 is provided a control part 15 generating a signal executing or activating an on screen display on the panel 3 and a control signal setting up the panel 3 through the on screen display.

[0029] The control part 15 comprises a menu key 31 for executing the on screen display, an arrow keys 33 for moving a cursor in up, down, left, and right directions so as to select a menu, and a close key 32 for concluding the on screen display or moving a menu to a high menu.

[0030] As shown in Fig. 2, a control circuit of the display apparatus comprises: a digitizing part 55 for converting red/green/blue (R/G/B) analog and horizontal/vertical (H/V) synchronous signals, which are inputted from an input/output (I/O) connector 53 connected to a computer, into digital signals[[,]]; a clock signal output part 54 provided in the digitizing part 55 [[and]] for outputting a clock signal[[,]]; a controller 50 for detecting a resolution, a timing mode and a dot clock by reading the frequencies of the H/V synchronous signals outputted from the I/O connector 53, and for controlling [[a]] the clock signal output part 54 to output a standard clock signal[[,]]; a scaler 57 for receiving the R/G/B signals digitized by the digitizing part 55 and the clock signal outputted from the clock signal output part 54, and for changing the signals in size or processing the signals[[,]]; and a panel driver 59 for formatting the signals from the scaler 57 to be displayed on the panel 3.

[0031] ~~Further, the~~ The control circuit of the display apparatus further comprises an on

screen display part 61 for showing an on screen display ~~according to a~~ under control of the controller 50, a memory 60 for storing an extended display identification data (EDID), bar code data, ~~used fact~~ usage data, and after-sale service data, and a bar code show key 13 for selecting the bar code and an after-sale service indicating line 25 to be shown. The memory 60 can be an electrically erasable programable read only memory (EEPROM).

[0032] The bar code show key 13~~, as shown in Fig. 1,~~ may be separately provided as shown in Fig. 2, or the control part 15 may be employed instead of the bar code show key 13 by combination of the keys thereof as seen in Fig. 1.

[0033] Herein, the extended display identification data, one of the data stored in the memory 60, includes data on [[a]] manufacturing company, [[a]] manufacturing data, [[a]] manufacturer's adjustment, a user mode, and other information. The bar code data includes data on accessories, such as a microcomputer, a scaler chip, and an analog-to-digital conversion (ADC) chip, and other information together with data on [[a]] manufacturing model and [[a]] manufacturing specification, which are indicated through the bar code. The ~~used fact~~ usage data ~~includes used facts~~ for the display apparatus ~~such as used~~ includes usage time, [[a]] power on/off times, and other information, and is recorded in the bar code together with the bar code data. The after-sale service data includes data on service times, [[a]] cause of service, [[a]] solution [[of]] to the [[cause]] problem causing the service, [[a]] name of the service engineer, and other information, and the after-sale service indicating line 25, like an interpretation line 22 of the bar code, is represented by digits, English letters, and signs.

[0034] The extended display identification data, the bar code and the bar code data are stored in the memory 60 ~~through~~ in a display data channel (DDC) transmission manner when the display apparatus is manufactured, and the extended display identification data is provided to a computer when power is initially turned on. Thus, in order to transmit data ~~through~~ in the display data channel transmission manner, the controller 50 is connected to the I/O connector 53 by an SDA line for transmitting data, and an SCL line for generating a

clock signal for transmitting data.

6. Please amend paragraphs [0036]-[0047] as follows:

[0036] The ~~used fact~~ usage data such as the accumulated [[used]] usage time of the display apparatus and the power on/off time thereof, [[is]] are counted by the controller 50, and stored in the memory 60.

[0037] The service engineer generally has a bar-code reader and a terminal including data [[on]] relating to the display apparatus. The service engineer outputs data, relating to [[on]] the display apparatus requiring [[a]] service, on the terminal by using the bar code reader, and provides [[a]] data to a central computer system of an after-sale service center ~~through an~~ either on-line or [[an]] off-line. Then, the central computer system [[makes]] forms the data on the display apparatus into a database[[,]] on the basis of the bar code and the after-sale indicating line 25.

[0038] As shown in Fig. 1, the bar code data, the used fact data, and the after-sale service data, which are stored in the memory 60, are confirmed through the bar code 21 shown on a bar code screen 20 on the panel 3 displayed according to selection [[of]] by the bar code show key 13. On the bar code screen 20, as shown ~~through~~ via the on screen display, ~~are shown~~ the bar code 21 including the interpretation line 22 represented by digits, English letters, and signs, and the after-sale service indicating line 25 represented by a bar [[codes]] code, English letters, digits, and signs, are displayed.

[0039] [[If]] When the bar code 21 and the after-sale service indicating line 25 are displayed on the bar code screen 20 of the display apparatus, the service engineer reads the bar code 21 by using the bar-code reader, and then the portable terminal of the service engineer [[shows]] displays the bar code data and the used fact data indicated by the bar code 21. Further, if the service engineer inputs the after-sale service indicating line 25 to the terminal, the terminal is immediately connected to the central computer system of the after-sale service center, and then the service facts of the display apparatus from the database of

the central computer system are [[shown]] displayed. At this time, instead of connecting the terminal to the central computer system in real time, the after-sale service data may first be ~~firstly~~ stored in the terminal of the service engineer, and [[then]] may then be stored to the database of the central computer system at a later time.

[0040] Hereinbelow, a process of executing the bar code screen 20 on the panel 3 will be described. Firstly, ~~according as~~ when the after-sale service engineer selects the bar code show key 13, an executing signal is transmitted to the controller 50. Then, the controller 50 controls the on screen display part 61 to show the on screen display, and [[then]] the bar code 21 and the after-sale service indicating line 25 stored in the memory 60 are [[shown]] then displayed on the on screen display.

[0041] Thereafter, if the service engineer inputs the bar code 21 and the after-sale service indicating line 25 shown on the bar code screen 20 to the terminal by using the bar-code reader, ~~on the terminal is shown~~ data [[on]] relating to the display apparatus, such as [[the]] accessories data, ~~the used fact~~ usage data, [[the]] after-sale service data, and other information, are displayed on the terminal. Then, the service engineer repairs the display apparatus, and inputs the failure cause and the service facts to the central computer system through on-line or off-line means so as to [[make]] form a database. On the other hand, where the display apparatus does not operate because of a power supplying error, the bar code data, the ~~used fact~~ usage data, and the after-sale service data, which are stored in the memory 60, can be obtained and known through the terminal.

[0042] Consequently, according to the present invention, a bar code is shown ~~through~~ by means of an on screen display, so that ~~it need not adhere~~ a separate bar code need not be adhered to a display apparatus, and there is no need ~~of apprehensions~~ for concern that the bar code [[is]] will be worn away or ~~vanished~~ will vanish. Further, according to the present invention, the bar code includes all sorts of data [[on]] relating to the display apparatus, such as accessories data, ~~used fact~~ usage data, service [[facts]] data, and other information, so that it is convenient and easy for a service engineer to [[know]] obtain information [[on]] relating

to the display apparatus by using a bar-code reader and a terminal.

[0043] On the other hand, in the case of a workshop using a plurality of display apparatuses, if an on screen display [[of]] for every display apparatus is executed, a specification and a state thereof are easily confirmed, so that it is convenient to inventory the display apparatus.

[0044] In the above description, the bar code show key 13 is ~~formed~~ in the form of an additional key, or a combination of the keys of the existing control part 15 so as to show the bar code data, the ~~used fact~~ usage data, and [[an]] after-sale service data. However, instead of using the bar code show key 13, ~~showing~~ display of the data may be selected by a new menu added to the existing on screen display[[,]] in the same way as in the existing menu selection.

[0045] As described above, according to the present invention, a bar code is shown ~~through~~ by means of an on screen display, so that ~~it need not adhere~~ a separate bar code need not be adhered to a display apparatus, and there is no need ~~of apprehensions~~ for concern that the bar code [[is]] will be worn away or ~~vanished~~ vanish.

[0046] Figure 1 shows a bar code 21 and an after-sale service indicating line 25 being displayed[[,]] in accordance with the principles of the present invention. Information can be displayed in a variety of different ways[[,]] in accordance with the principles of the present invention. For example, data in the bar code 21 can include manufacturing data and other types of data, and data in the after-sale service indicating line 25 can include after-sale service data and other types of data. Also, when the bar code show key 13 is pressed, a first bar code 21 and a second bar code (not shown) can be displayed, with the first bar code 21 containing predetermined manufacturing information and the second bar code containing after-sale service data. Thus, the second bar code ~~would be able to~~ can be modified by a service technician after service [[was]] is performed~~, for example~~. The second bar code could be in lieu of the after-sale service indicating line 25, for example. In addition, there could be a third bar code (not shown) below the first and second bar codes, for example, with

additional information such as ~~used fact~~ usage data or other data. Also, in accordance with the principles of the present invention, the above-described bar code data could be stored in a memory in a particular electronic device, and could ~~therefor~~ therefore eliminate a need to affix a bar code label onto that particular electronic device. If the particular electronic device had a display screen mounted thereon, then the bar code information could be displayed on that display screen. However, if the electronic device did not have a display screen mounted thereon, then the electronic device could be placed in communication with a display device, and then the bar code data of the particular electronic device could be displayed on the display device.

[0047] While there have been illustrated and described what are considered to be preferred embodiments of the present invention, it will be understood by those skilled in the art that various changes and modifications may be made, and equivalents may be substituted for elements thereof without departing from the true scope of the present invention. In addition, many modifications may be made to adapt a particular situation to the teaching of the present invention without departing from the central scope thereof. Therefore, it is intended that the present invention not be limited to the particular embodiment disclosed as the best mode contemplated for carrying out the present invention, but that the present invention ~~includes~~ include all embodiments falling within the scope of the appended claims.